

Comparison between core and high value data Potential impact on GSGF

Dominique Laurent, France



UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Context



UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Overview

	<i>Core data</i>	<i>High Value Datasets</i>
<i>Key purpose</i>	Priority data for SDG	Data in scope of the Open Data Directive – article 14
<i>Actors</i>	UN-GGIM: Europe Regional Committee Working Group A	European Union Impact Assessment Study: Cabinet Deloitte
<i>Objective</i>	Recommendations for content	Content description & recommendations for publication as open data (Impact Assessment Study)
<i>Scope</i>	Geographic data	Data on 6 categories



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Geospatial

**Earth
observation and
environment**

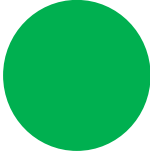




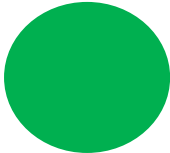
Meteorological

Statistics

**Companies and
company
ownership**

Mobility

Selection criteria

High value data criteria	Core data	
<p><i>Generate significant socio-economic or environmental benefits</i></p> <p><i>and innovative services</i></p>	 	<p><i>Core data is priority data to analyse, achieve or monitor SDG</i></p> <p><i>Generating innovative services is not a core data target (but it may contribute)</i></p>
<p><i>Benefit a high number of users</i></p> <p><i>In particular SMEs</i></p>	 	<p><i>Core data should in general be accessible to everyone</i></p> <p><i>Main target is public bodies but SME may also benefit from core data</i></p>
<p><i>Assist in generation revenues</i></p>		<p><i>Generating revenues is not core data target</i></p>
<p><i>Be combined with other datasets</i></p>		<p><i>Combined with other datasets, core geographic data offers wide range of applications: background map, geocoding, indicator computation, ...</i></p>



General comparison



UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Comparison exercise

- Source documents:
 - For High Value Datasets, impact assessment study and presentations by Cabinet Deloitte (PPT)
 - Webinar on 28/07/2020
 - Webinar on 04/09/2020
 - For core data, UN-GGIM: Europe Working Group A deliverables
 - Selection of core themes
 - Recommendation of content for each selected theme

Review phase by Member States



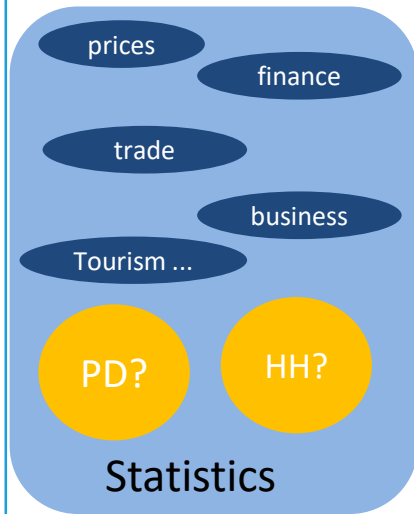
UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Comparison results (methodology)

	Core data	HVD impact assessment study
Rationale for choice	Rationale for choice was investigated and published	Rationale for choice not exposed
INSPIRE influence	Strong (preliminary list of potential themes, use of INSPIRE terminology)	Weaker (other themes, terminology not always consistent)
Priorities	<p>2 levels:</p> <ul style="list-style-type: none"> - Core recommendations - Good practices <p>=> step-wise implementation</p>	<p>2 levels:</p> <ul style="list-style-type: none"> - Lower intensity intervention - Higher intensity intervention <p>=> option to be chosen for regulation</p>



Comparison exercise (theme selection)



Statistics

Companies

Geospatial

Earth
observation and
environment

Meteorological

Statistics

Companies and
company
ownership

Mobility

Core
data



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

SU

AU

GN

AD

BU

CP

Geospatial

EL

HY

LC

LU

OI

PS

AM

GE

SO

OF

SR

NZ

EF

BR

SD

HB

Environmental data
(noise, air quality,
waste ...)

Earth observation and environmental data

MF

AC

Meteorological

TN

Mobility

US -
Basic
services

INSPIRE

Analysis of selected HVD themes by the impact study

- Comparison with UN-GGIM Europe core data
 - HVD has wider scope => more themes
 - Most of core data themes are considered as HVD
 - Only 2 missing themes in HVD
 - Statistical Units (but some overlap with administrative units)
 - Basic services
 - Difficult to evaluate HVD selection as rationale is not exposed in the impact assessment study

Analysis of selected HVD themes by the impact study

- Comparison with INSPIRE
 - Themes missing in HVD
 - Facilities: governmental (US), agriculture (AF), industrial (PF)
 - Resources : mineral (MR), energy (ER)
 - Area Management (AM)
 - Additional themes in HVD
 - Economic statistics
 - Companies



Zoom on Statistics category

Category	Sub-category
Social statistics	Demography
	Labour market
	Poverty and inequality
	Health statistics
Macro-economic	National accounts

ESS data sets
(already freely available)

Category	Sub-category
Macro-economic	Price statistics
	Government finances
Business statistics	Short-term business statistics
	Trade statistics
	Tourism statistics

List of HVD datasets

INSPIRE theme SU
not included in
HVD

Unclear status of ESS data sets:
in or out HVD?



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Comparison exercise (priorities for EO data)

Earth observation	Environmental data	
Hydrography (I)	Air quality (prio)	Protected sites (I)
Land parcels (I), cover (II), use (III)	Biodiversity (prio)	Bio-geographical regions (III)
Elevation (II)	Emissions (prio)	Environmental monitoring facilities (III)
Geology (II)	Nature preservation (prio)	Habitats/Biotopes (III)
Ortho-imagery (II)	Noise (prio)	Natural Hazards (III)
Oceanography (III)	Waste (prio)	Soil (III)
Sea Regions (III)	Water (prio)	Species distribution (III)

First HVD priority is on specific data for environmental reporting whereas core data focus on basic data (INSPIRE themes) required by a wide range of use cases.



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Comparison exercise (priorities for mobility)

Mobility

Lower intensity intervention – Datasets in scope (in addition to inland waterways)



INSPIRE features under the Transport Networks data theme, including:

Common	Road	Rail	Water			Air	Cableways	
<ul style="list-style-type: none">• Access Restriction• Condition Of Facility• Maintenance Authority• Marker Post• Owner Authority• Restriction For Vehicles• Traffic Flow Direction• Transport Area• Transport Link• Transport Link Sequence• Transport Link Set• Transport Network• Transport Node• Transport Object• Transport Point• Transport Property• Vertical Position	<ul style="list-style-type: none">• E-Road• Form Of Way• Functional Road Class• Number Of Lanes• Road• Road Area• Road Link• Road Link Sequence• Road Name• Road Node• Road Service Area• Road Service Type• Road Surface Category• Road Width• Roundabout• Speed Limit• Vehicle Traffic Area	<ul style="list-style-type: none">• Design Speed• Nominal Track Gauge• Number Of Tracks• Railway Area• Railway Electrification• Railway Line• Railway Link• Railway Link Sequence• Railway Node• Railway Station Area• Railway Station Code• Railway Station Node• Railway Type• Railway Use• Railway Yard Area• Railway Yard Node	<ul style="list-style-type: none">• Beacon• Buoy• CEMT Class• Condition Of Water Facility• Fairway Area• Ferry Crossing• Ferry Use• Inland Waterway• Marine Waterway• Port Area• Port Node• Restriction For Water Vehicles• Traffic Separation Scheme• Traffic Separation Scheme Area	<ul style="list-style-type: none">• Traffic Separation Scheme Crossing• Traffic Separation Scheme Lane• Traffic Separation Scheme• Traffic Separation Scheme Separator• Water Link Sequence• Water Node• Water Traffic Flow Direction• Waterway• Waterway Link• Waterway Node		<ul style="list-style-type: none">• Aerodrome Area• Aerodrome Category• Aerodrome Node• Aerodrome Type• Air Link• Air Link Sequence• Air Node• Air Route• Air Route Link• Airspace Area• Apron Area• Condition Of Air Facility• Designated Point• Element Length• Element Width	<ul style="list-style-type: none">• Field Elevation• Instrument Approach Procedure• Lower Altitude Limit• Navaid• Procedure Link• Runway Area• Runway Centreline Point• Standard Instrument Arrival• Standard Instrument Departure• Surface Composition• Taxiway Area• Touch Down Lift Off Area• Upper Altitude Limit• Use Restriction	<ul style="list-style-type: none">• Cableway Link• Cableway Link Sequence• Cableway Link Set• Cableway Node



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

First HVD priority is on water transport network whereas core data includes rich information on road transport and more basic one on railway, water and air transport

Potential impact on GSGF

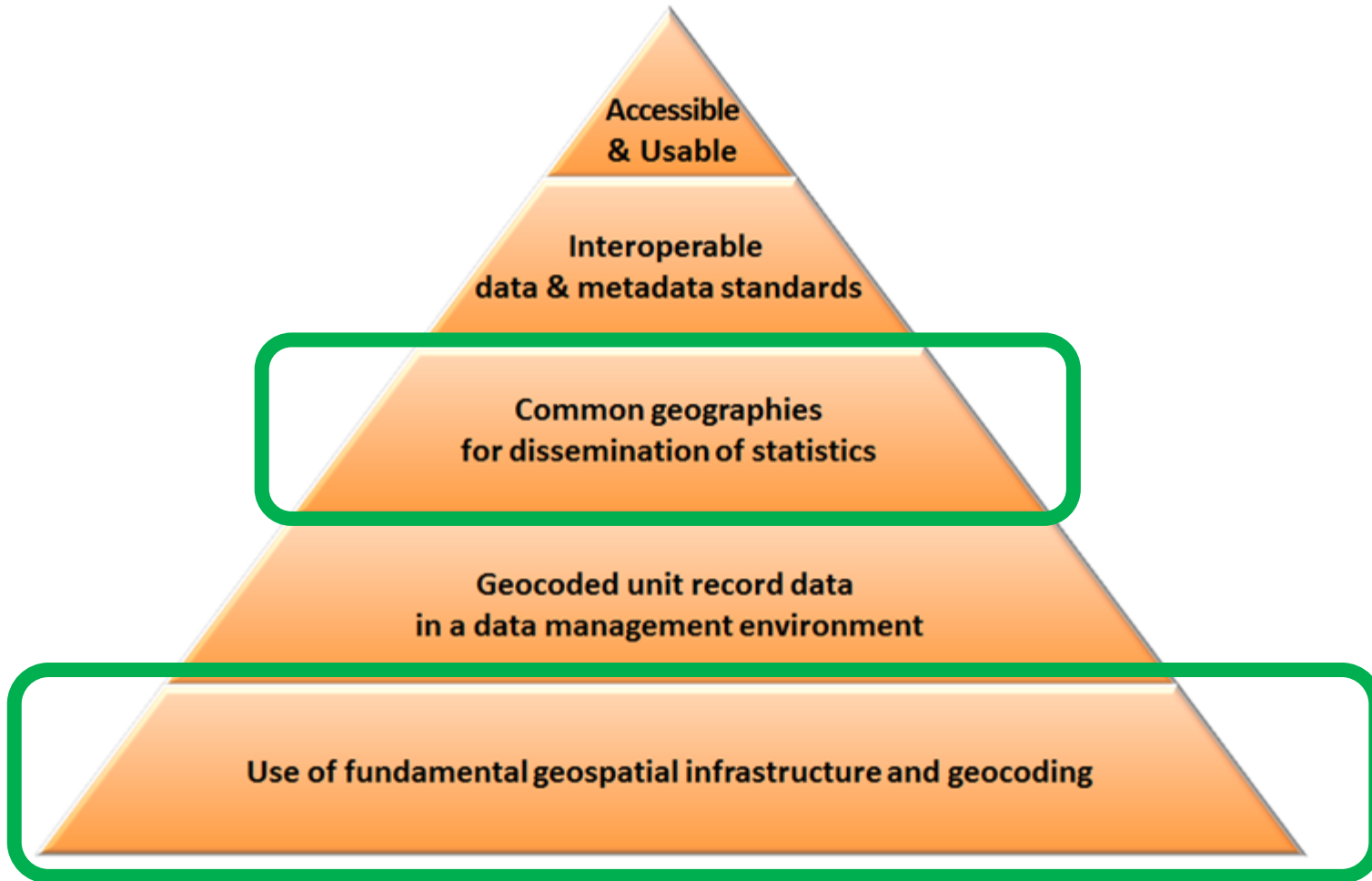


UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Levels impacted by HVD



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Common geographies for statistics production

Administrative units	Place Names	Addresses	Buildings	Cadastral parcels
CC-BY 4.0				
GeoPackage; GeoJSON; INSPIRE requirements.	GeoPackage; CSV; GeoJSON; INSPIRE requirements.	GeoPackage; CSV; GeoJSON; INSPIRE requirements.	GeoPackage; GeoJSON; INSPIRE requirements.	GeoPackage; GeoJSON; INSPIRE requirements.
Mandatory				
Bulk download; INSPIRE distribution services; RestAPI (e.g. OGC API, ArcGIS RestAPI, Carto API).				Read-only mode (WMS service defined by INSPIRE).
INSPIRE				
INSPIRE; GeoDCAT-AP.				
INSPIRE				
National Geodata Catalog and/or open data catalog				
Annual update	When necessary	When necessary	When necessary	When necessary
From municipalities to countries; sea-frontiers.	National coverage.	Partial National coverage (e.g. most populated cities).	Partial National Coverage (e.g. most populated cities); Level of scale 1:5000.	National coverage; Level of scale 1:5000.
National identification code; identification code of the upper administrative level; official name; country code; name in multiple languages (only for countries with more than one official language).	Name; name in multiple languages (only for countries with more than one official language); category; latitude and longitude (INSPIRE)	Latitude and longitude; house number; suffix of the number; name of the street; name of the municipality; national identification code of the municipality; last update.	Footprint of the building; entrances; floors; type of use.	Geometry of cadastral parcels; type of particle; particle code; references to the administrative area to which the particle belongs.

The expected
themes for
fundamental
geospatial
infrastructure are
present in HVD



UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Common geographies for statistics production

- HVD (as proposed by the impact study) has some discrepancies with UNGGIM Europe core data
 - INSPIRE terminology not always used in HVD
 - “Type of particle” (CP)
 - => expected content is not defined
 - Less ambition on geographic coverage (themes AD, BU)
 - Some differences in key attributes (mainly AD)



Common geographies for dissemination of statistics

- UN-GGIM Europe Core Data recommends
 - Grids
 - Administrative based units (NUTS- LAU)
 - Urban statistical units
 - Enumeration districts
- Theme “Statistical Units” is not included in HVD impact study
 - Except implicitly administrative based units

Missing topic in
HVD study

Conclusions



UN-GGIM: EUROPE

UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT



Conclusions

- Core Data and HVD
 - Different contexts and objectives
 - **Common principle for selection: wide use**
- Some different points of view on “EO” and “Mobility”
 - HVD impact study: candidate priority HVD is addressing dedicated data (e.g. to reporting for European Directives, to Water Transport)
 - Maybe not in-line with the selection criteria of the Open Data Directive (e.g. benefit a high number of users)
 - Driven more by feasibility than by user requirements?



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT

Conclusion

- **Most of UNGGIM core data** is considered **as high value data** by the **HVD impact study**
- Requirements of statistical community
 - Themes necessary for the first level of GSGF are included in HVD selection by the impact study (CP, BU, AD)
 - HVD choices by the impact study on “Statistics” category would need to be clarified
- To be properly established, HVD selection would require
 - Providing rationale for selection
 - More thoroughly investigating existing material
 - relevant stakeholders e.g. statistical community, UN-GGIM: Europe core data



UN-GGIM
UNITED NATIONS INITIATIVE ON
GLOBAL GEOSPATIAL
INFORMATION MANAGEMENT